To: EJW, JAJ, ERL, RCS, GDC   cc: Dist.#1   Date: February 6, 1970

From: E. L. Quan

Subject: IW 3-0 Pacific Resin and Chemicals-Columbia Slough

On February 5, 1970, Chuck Gray and I investigated a fish kill in a pond located between Joslyn Mfg. Company and the Columbia Slough. Employees at Joslyn's first noticed dead and distressed carp, crappies, and goldfish on February 2. We received word about the problem on February 4 from Dave Ackerill, Joslyn Co.

As far as I could determine, the following events led to the fish kill:

1.   The city of Portland has a combined sewer outfall leading from Pacific Resin and Chemicals through Joslyn's property to Columbia Slough. Sometime last year, city employees tapped a 12-inch hole in the sewer line at the toe of the fill at Joslyn's yard, preseumably for sampling purposes.

2.   During the recent high rainfall and high river stages, the Columbia Slough was backed up, preventing free flows in the sewer line. Phenolic waste from Pacific Resin discharged into the sewer line during this period bubbled out of the tapped hole, spilling over both sides of the dike. Resinous waste plastered along the bank indicated that the high water line was 1.5 feet above the sewer line.

3.   A water sample collected 5-7 days after the event occurred showed a phenol concentration of 4.1 mg/1. It takes at least 10 mg/1 of phenol to distress coarse fish and from 20 to 30 mg/1 to kill them.

4. A few carp and crappies were observed to be in distress near
    the sewer line but in no other areas of the pond. A flock of
    seagulls was present on the pond so the total number of
    fishes involved in the kill is unknown.

Howard Harris, Portland STP Superintendent, indicated that a
pump station has been designed to intercept this particular sewer
and construction will probably begin in 30 days. Pacific Resin
will provide pretreatment to its waste before sending it to Portland's
STP for disposal.   Good !